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PATENTS, TRADEMARKS & RELATED INTELLECTUAL PROPERTY MATTERS

Docket: 20/168

Hon. Commissioner of Patents and Trademarks
Alexandria, VA 22313-1450

Date: May 20, 2004

In re Application of:

Max Harry Weil, et al.

Serial No.: 09/678,616

Group Art Unit: 3764

Filed: October 4, 2000

Examiner: Fenn C. Mathew

For: CHEST COMPRESSOR

SECOND APPEAL FROM THE PRIMARY EXAMINER TO THE BOARD OF PATENT APPEALS AND INTERFERENCES

Enclosed are the following:

1. APPEAL BRIEF FEE Previously paid
2. APPEAL BRIEF:
   a. Brief For Appellant (3 copies).
   b. Appendix To Brief (3 copies).
3. Return Postcard.

The Commissioner of Patents and Trademarks is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Account No. 06-1985.

I hereby certify that this correspondence is being deposited with the United States Postal service as First Class mail in an envelope addressed to: Mail Stop Board of Patent Appeals and Interferences, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450, on May 20, 2004.

Leon D. Rosen
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LDR/ks
Encl.
cc: Joe Bisera

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

In re Application of:

Max Harry Weil, et al.

Serial No.: 09/678,616 — Group Art Unit: 3764

Filed: October 4, 2000 — Examiner: Fenn C, Mathew

For: CHEST COMPRESSOR

BRIEF FOR APPELLANT UNDER 35 CFR 1.192(c)

Hon. Commissioner of Patents
Washington D.C. 20231

May 20, 2004
Los Angeles, CA 90024

This is an appeal from the Examiner of Group Art Unit 3764 rejecting claims 15 and 16 which represent all of the claims in the case.

REAL PARTY IN INTEREST

The real party in interest is the assignee, The Institute of Critical Care Medicine, a nonprofit California corporation.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

STATUS OF CLAIMS

Pending: Claims 15 and 16.

Cancelled: Claims 1-14.

STATUS OF AMENDMENTS

An amendment was filed subsequent to the final rejection, but was refused entry.

SUMMARY OF THE INVENTION

The present invention relates to apparatus such as shown in applicant's Fig. 1, for applying compressions to the chest of a patient who has undergone cardiac arrest or the like. The apparatus includes an actuator (16) with a vertical axis, and with a pressing member (12) for repeatedly pressing against the patient's chest (e.g. with a force of 100 to 120 pounds). A torso wrap (32) wraps to the back of the patient, so when the pressing member presses against the patient's chest, such forces are withstood by the patient's back. The apparatus also includes a saucer-shaped stabilizer (150) that prevents the actuator (16) from tilting by many degrees until the pressing member (12) presses with only one side against the patient, which could injure the patient. Instead, the stabilizer (150 in Fig. 2) is saucer-shaped and extends substantially completely around the actuator axis and against the patient's chest to prevent actuator tilt.

The actuator (16 in Fig. 2) includes a cylinder (60) and a piston(62) with a plurality of telescoping parts. The telescoping parts are shown in their fully extended position with the pressing member at 12A. The lowermost piston part (shown at 66A and 66) has an inside surface (74) exposed to pressured fluid. The diameter of the inside surface is at least half of the diameter of the inside surface of the cylinder (60). This assures that the lowermost piston part (66A) is pushed down with a high force.

The downward stroke of the pressing member, shown at 90 in Fig. 2, is long. The telescoping parts reduce the height of the actuator above the chest of a patient despite the long stroke. In a disaster involving many people, an ambulance can carry a few patients by stacking them one above the other, with only a small space above each patient. Applicant's telescoping actuator reduces the required height above the patient so the ambulance can carry more patients.

ISSUES

Both of the claims 15 and 16 were rejected as obvious over a plurality of references. Thus a major issue is whether these claims are obvious over these references.

GROUPING OF CLAIMS

The rejected claims do not stand or fall together. Each claim is discussed in the Argument section of this Appeal Brief.

ARGUMENT

1. The Prior Art

Waide, et al. (5,399,148).

Woudenberg, et al. (4,664,098).

Mills (3,978,854)

Cantrell, et al. (6,174,295)

2. Discussion of Each Claim

Claim 15 was rejected as obvious over Woudenberg (4,664,098) in view of Barkalow (3,610,233) and Mills (3,978,854). Claim 15 describes apparatus for applying compressions to the chest of a patient, such as shown in applicant's Fig. 2. The apparatus includes a cylinder (60) and a plurality of telescoping piston parts (64, 66) that telescope in one another and that are exposed to pressured air in the cylinder. The lowermost piston part (66 and at 66A) has a lower piston inside surface (74) exposed to the pressured air. The lower piston inside surface has at least half the diameter of the inside surface of the cylinder (60). This assures that the actuator can apply a large force to the patient's chest along the entire stroke 90 of the piston. The telescoping piston parts allow the device to be used in a space of limited height to produce a long compression stroke (90).

Woudenberg and Barkalow each shows a non-telescoping chest

compressor, in that Woudenberg shows a bellows-like bladder 60 while Barkalow shows a single piston 16 (Fig. 5) in a cylinder 13. Mills shows a device for supplying oxygen at a low pressure to a patient. His Fig. 7 shows that when the pressure to the left of diaphragm 44' deceases, the center 110 of the diaphragm moves to the left and deflects a valve stem 76' to admit more oxygen into the chamber 54'. To manually increase oxygen pressure, a person depresses a button 134 to move it to the left. The button pushes a plunger 128 to the left. This tends to compress a spring 154 which pushes a piston 146 towards the diaphragm. The piston 146 slides within the plunger 128, which Mills refers to as a "telescoping" (col. 6, lines 2-6). Thus, Mills does not suggest applicant's plurality of telescoping piston parts driven by pressured fluid, that provide a long forceful stroke in a short storage space. Mills' use of the word "telescoping" is no more relevant than to mention that the parts of an old telescope are "telescoping".

Thus, none of the references suggest that a chest compressor with a cylinder and piston for applying long compression strokes to a patient's chest should be constructed with a piston driven by pressured fluid, that has telescoping piston parts. Also, the references do not suggest that the smallest diameter (lowest) telescoping piston part has an inside diameter that is at least half the cylinder inside diameter to assure that a large force (e.g. 100 to 120 pounds) is applied. Accordingly, applicant believes that claim 15 is not anticipated by the references and should be allowed.

Claim 16 was rejected as obvious over Waide (5,399,148) in view of Cantrell (6,174,295). Claim 16 describes an actuator (16 in applicant's Fig. 2) and a pressing member (12) that presses against the patient. The claim also describes a saucer-shaped stabilizer fixed to the actuator and that rests against the patient's chest. The stabilizer has an outer portion (e.g. 150 in Fig. 1) that is curved and extends substantially completely around the axis and that rests against the patient's chest. The curved largely 360° stabilizer takes up minimum space and prevents tilting in any direction.

Waide shows bent legs 3 that each engages the patient along about 60°,

for a total of about 120° (one-third circle). Cantrell shows an actuator (gear box 130 in his Fig. 10) that moves a pad unit with a pad 23, up and down to compress a patient's chest. His Fig. 4 shows that his pad 23 is part of a pad unit 20 that also includes a plate 22 and strips 32a, 32b at opposite sides that press against opposite sides of the chest and that move up and down with the pad 23. Cantrell does not show a stabilizer fixed to his actuator to remain stationary as the pressing member is moved down and up, against and away from a patient's chest. Even his strips 32a, 32b (Fig. 4) (which move up and down) extend no more than 220° around the actuator axis rather than substantially completely around the axis. His strips are not curved,to stabilize but take up minimum space.

Thus, Waide shows a stabilizer that is fixed to an actuator, but does not show it extending substantially completely around the actuator. Cantrell does not show a stabilizer that is fixed to an actuator to remain stationary as a separate pressing member is pushed down and lifted up. Also, neither reference shows a stabilizer that is saucer-shaped and has a curved outer portion that extends around the actuator axis. Accordingly, applicant believes that claim 16 should be allowed.

It is respectfully urged that for these reasons a reversal of the Examiner is in order. An oral hearing is not requested.

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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APPENDIX TO BRIEF
CLAIMS 15 and 16

Hon. Commissioner of Patents
Washington D.C. 20231

May 17, 2004
Los Angeles, CA 90024

15. Apparatus for applying compressions to the chest of a patient to stimulate blood circulation, comprising:

an energized compressor assembly which includes an actuator and a source of pressured fluid;

a torso wrap that couples to said actuator and that wraps to the back of the patient, so downward forces of the piston against the patient's chest are withstood by upward forces applied to the patient's back;

said actuator includes a cylinder which has an inside surface and a piston with a plurality of telescoping piston parts that telescope in one another and that are exposed to pressured fluid in said cylinder, including an upper piston part that fits closely in said cylinder and a lowermost piston part, and including a pressing member on a lower end of said lowermost piston part for pressing against the patient's chest;

said lowermost piston part having a lower piston inside surface which is exposed to said pressured fluid and which has at least half the diameter of said

inside surface of said cylinder.

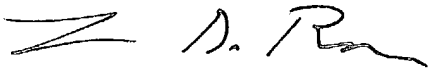
16. Apparatus for applying compressions to the chest of a patient to stimulate blood circulation, comprising:

an energizable compressor assembly which includes an actuator that has a vertical axis that extends perpendicular to the patient's chest, and a pressing member for pressing against the patient;

a torso wrap that couples to said actuator and that wraps to the back of the patient, so downward forces of the pressing member against the patient's chest are withstood by upward forces applied to the patient's back;

a saucer-shaped stabilizer that has a center fixed to said actuator and a curved radially outer portion that extends substantially completely around the axis and that rests against the patient's chest.

Respectfully submitted,



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